

CLAIMS

We claim:

1. A method comprising:
 - (a) accepting a non-cash document into an automated banking machine;
 - (b) reading indicia from the document with the machine;
 - (c) analyzing the indicia with the machine to resolve data represented by the indicia;
 - (d) including the data in a transaction message sent by the machine to a remote computer that is adapted to authorize a transaction at the machine involving the document.
2. The method according to claim 1 and further comprising:
 - (e) storing the document in a compartment in the machine.
3. The method according to claim 2 wherein step (e) comprises:

moving a storage module comprising a plurality of compartments, such that the compartment is in operative connection with an outlet from a transport path along which the document moves in the machine.

4. The method according to claim 3 wherein the document moves along a transport path from an accepting opening toward the compartment, and further comprising:

- (f) accepting an envelope in the accepting opening in the machine;
- (g) moving the envelope along the transport path;
- (h) moving the storage module such that a further compartment is in operative connection with the outlet;
- (i) storing the envelope in the further compartment.

5. The method according to claim 4, wherein the machine comprises a printer and a sensor adjacent the transport path and prior to step (e):

- (j) sensing with a sensor when a leading edge of the document has moved past the printer in a direction of travel in the transport path;

(k) moving the printer in response to step (j) to a position adjacent the transport path;

(l) printing indicia with the printer on the document.

6. The method according to claim 5 and prior to step (i) further comprising:

(m) sensing with the sensor when a leading edge of the envelope has moved past the printer in a direction of travel in the transport path;

(n) moving the printer in response to step (m) to a position adjacent the transport path;

(o) printing indicia with the printer on the envelope.

7. The method according to claim 1 wherein step (b) includes reading both magnetic and visible indicia from the document.

8. The method according to claim 7 wherein step (c) includes sensing for the presence of magnetic features on the document, but not determining the magnetic indicia corresponding to such magnetic features.

9. The method according to claim 8, wherein step (c) comprises determining that the document is acceptable by the machine responsive to the presence of the magnetic features thereon.

10. The method according to claim 7, wherein step (c) comprises determining whether at least one area of the document in which magnetic indicia are read in step (b) corresponds to at least one area in which visible indicia is read in step (b).

11. The method according to claim 10, wherein step (c) further comprises:

determining at least one visible character corresponding to the visible indicia in the at least one area in which visible indicia is read on of the document, and determining a magnetic profile in the at least one area in which magnetic indicia is read on the document, and determining if the magnetic profile corresponds on the document to the at least one visible character.

12. The method according to claim 11, wherein the document moves in a transport path in a direction of travel, and wherein the transport path has a width substantially wider than the document, and wherein step (b) comprises:

reading visible indicia along substantially the entire width of the transport path with a scanner;

reading magnetic properties with discrete magnetic elements positioned along the width of the transport path.

13. The method according to claim 7 and prior to step (b) further comprising activating at least one of the magnetic and visible indicia to facilitate reading thereof.

14. The method according to claim 13 wherein the activating comprises exposing the document to a magnetic field.

15. The method according to claim 13 wherein the document moves along a transport path in the machine, and wherein the activating step for the at least one indicia is performed in the transport path in an activating location, and wherein the reading step for the at least one indicia is performed at a reading location in the transport path, wherein the reading location is disposed in the transport path from the activating location.

16. The method according to claim 11 wherein in step (c) determining if the magnetic profile corresponds to the at least one visible character includes bringing data representative of the visible indicia and data representative of the magnetic profile into registration with one another.

17. The method according to claim 16 wherein in step (c) bringing the visible indicia and magnetic profile into registration includes imposing a common coordinate system on both the data representative of the visible indicia and the magnetic profile.

18. The method according to claim 17 wherein in step (c) imposing the common coordinate system includes determining a location of at least one corner of the document, and placing a first corner at an origin of the common coordinate system.

19. The method according to claim 17 wherein in step (c) imposing the common coordinate system includes determining positions of a plurality of sides of the document.

20. The method according to claim 19 wherein in step (c) imposing the common coordinate system further comprises determining a location of a corner of the document from the position of the plurality of sides, and placing the corner at the origin of the common coordinate system.

21. The method according to claim 1 wherein step (b) includes reading both visible and non-visible indicia from the document.

22. The method according to claim 21 wherein step (b) further includes determining if at least one portion of the non-visible indicia and visible indicia of the document correspond.

23. The method according to claim 1 wherein step (c) further comprises comparing data corresponding to indicia read from the document in step (b) to an electronic template.

24. The method according to claim 23 and further comprising:

receiving at least one input from a user of the machine;

and wherein step (c) comprises comparing the data corresponding to the indicia read from the document to the template responsive to the at least one input.

25. The method according to claim 24 wherein the template is selected from among a plurality of templates responsive to the at least one input.

26. The method according to claim 23 wherein step (c) further comprises, reformatting data corresponding to the indicia read from the document, if the data does not correspond to the template.

27. The method according to claim 26 wherein in step (c) the reformatting corresponds to changing an orientation of the image.

28. The method according to claim 27 wherein in step (c) the reformatting corresponds to changing the orientation of the image 180°.

29. The method according to claim 26 wherein in step (c) the reformatting corresponds to aligning the image in an imposed coordinate system.

30. The method according to claim 29 wherein step (b) includes reading both visible and non-visible indicia from the document.

31. The method according to claim 30 wherein step (b) includes reading both visible and magnetic indicia from the document.

32. The method according to claim 31 wherein step (b) includes reading at least one visible character from the document and a magnetic profile from the document, and wherein step (c) includes comparing data corresponding to the location of the at least one character on the document to the magnetic profile.

33. The method according to claim 1 wherein step (c) includes determining if at least one of certain characters is present in the visible indicia, and carrying out step (d) responsive to the presence of the at least one character.

34. The method according to claim 33 wherein in step (c) the at least one character includes a routing character.

35. The method according to claim 33 wherein in step (c) the at least one character includes a transfer character.

36. The method according to claim 33 wherein in step (c) the at least one character includes a micr character.

37. The method according to claim 33 wherein in step (c) the at least one character comprises a currency type character.

38. The method according to claim 37 wherein in step (c) the at least one character comprises a dollar sign.

39. The method according to claim 33 wherein in step (c) the at least one character comprises a monetary amount.

40. The method according to claim 32 wherein step (c) includes determining if routing and transfer characters and a monetary amount are present in the visible indicia, and carrying out step (d) responsive to the presence of such characters and monetary amount.

41. The method according to claim 1 wherein step (c) includes determining if the indicia corresponds to known characters with at least a level of assurance, and carrying out step (d) responsive to the level of assurance having been reached.

42. The method according to claim 40 wherein step (c) includes determining if the indicia corresponds to known characters of a predetermined type with at least a level of assurance, and carrying out step (d) responsive to the level of assurance having been reached.

43. The method according to claim 1 wherein the automated banking machine includes a display, and further comprising the step of reproducing an image of at least a portion of the document on the display.

44. The method according to claim 42 wherein the automated banking machine includes a display, and further comprising reproducing an image of at least a portion of the document on the display.

45. The method according to claim 1 and wherein the document includes a check, and further comprising the steps of:

(e) receiving with the banking machine a further transaction message from the host computer, the further transaction message including data authorizing the cashing of the check;

(f) dispensing cash from the automated banking machine responsive to the message received in step (e).

46. The method according to claim 45 wherein a value of cash dispensed in step (f) is less than an amount entitled to be received for the check.

47. The method according to claim 46 and further comprising:

(g) dispensing an item with the automated banking machine redeemable for cash.

48. The method according to claim 47 wherein in step (g) the item is redeemable for cash in a difference amount, which difference amount corresponds to the amount less the value.

49. The method according to claim 47 and further comprising:

capturing an image of a person placing the document for acceptance in the automated banking machine, and wherein in step (g) an image of the person is included on the item.

50. The method according to claim 47 wherein in step (g) the item is printed by the machine.

51. The method according to claim 47 and further comprising:

(h) storing a record corresponding to the item in a data store.

52. The method according to claim 51 and further comprising:

(i) redeeming the item for cash;

(j) recording data in the data store indicative that the item has been redeemed.

53. The method according to claim 47 wherein the item comprises a further document, and further comprising:

performing steps (a) through (c) with the further document.

54. The method according to claim 46 and further comprising:

(g) dispensing a non-cash item from the automated banking machine
redeemable for goods or services.

55. The method according to claim 54 and further comprising:

(h) storing a record corresponding to the item in a database.

56. The method according to claim 55 and further comprising:

- (i) redeeming the item for goods or services;
- (j) recording data in the data store indicative that the item has been redeemed.

57. The method according to claim 46 and further comprising:

presenting through at least one output device on the machine a plurality of options for application of at least a portion of a difference between the amount and the value.

58. The method according to claim 57 and further comprising:

receiving at least one selection input through at least one input device on the automated banking machine corresponding to a selected one of the plurality of options.

59. The method according to claim 58 and further comprising:

- (g) responsive to the at least one selection input, carrying out through operation of the machine, applying the portion of the difference in accordance with the selected one of the plurality of options.

60. The method according to claim 59 wherein in step (g) the automated banking machine is operative to dispense a non-cash item.

61. The method according to claim 59 wherein in step (g) the automated banking machine is operative to cause the portion to be added to an account.

62. The method according to claim 59 wherein in step (g) the automated banking machine is operative to cause the portion to be transferred to an entity other than a user currently operating the machine.

63. The method according to claim 62 wherein in step (g) the machine is operative to cause the portion to be contributed to a charity.

64. The method according to claim 44 wherein the document includes a check, and further comprising:

receiving with the banking machine a further transaction message from the host including data authorizing the cashing of the check;

dispensing a value of cash from the machine responsive to the further transaction message, wherein the value is less than an amount entitled to be received for the check;

determining a difference between the amount and the value through operation of the machine;

presenting through at least one output device on the machine a plurality of options for application of at least a portion of the difference;

receiving at least one input through at least one input device on the machine corresponding to a selected one of the options;

delivering responsive to the selected one of the options at least one non-cash item from the machine that is redeemable for value;

recording data in at least one data store responsive to the delivery of the non-cash item;

redeeming the non-cash item;

including data in the at least one data store indicative of the non-cash item having been redeemed.

65. The method according to claim 64 and further comprising:

moving the document in the machine along a transport path in a direction;

sensing with a sensor adjacent to the transport path that a leading edge of the document has moved in the direction past a printer;

moving the printer from a position disposed from the transport path to a position adjacent the transport path;

printing on the document with the printer;

moving a storage module comprising a plurality of compartments such that a selected first one of the plurality of compartments is in operative connection with an outlet from the transport path;

moving the document through the outlet of the transport path into the selected first one of the compartments;

receiving a deposit envelope into the machine;

moving the deposit envelope in the transport path;

printing on the deposit envelope with the printer;

moving the storage module such that a selected second one of the compartments is in operative connection with the outlet of the transport path;

moving the envelope through the outlet into the selected second one of the compartments.

66. An automated banking machine operative to carry out the method recited in claim 1.

67. Machine readable media operative to cause at least one computer in an automated banking machine to carry out the method steps recited in claim 1.